

60,130-1495
02MRA0344**IN THE SPECIFICATION:**

Please replace paragraph [2] with the following amended paragraph:

- [2] Typically, commercial vehicle trailer axles comprise an axle hung from a trailing arm on either side of the a trailer chassis and supported by a suspension member such as a leaf spring or air spring assembly. The axle is attached to the suspension member by U bolts or spring seats, as is known to a worker skilled in the art. A brake assembly is mounted ~~to each wheel~~ inside an inner circumference of ~~the wheel~~ wheels mounted to the axle. The brake assembly is mounted such that ~~the~~ a wheel hub rotates around the brake assembly disposed within ~~the~~ an inner circumference of the a wheel rim. The brake assembly typically includes a rotor attached to ~~a~~ the wheel hub fixed to the end of the rotating axle. The wheel hub and rotor are attached such that brake torque generated at the rotor is transmitted to the wheel hub and in turn to the ~~road~~ wheel.

Please replace paragraph [3] with the following amended paragraph:

- [3] The inner circumference of the wheel rim is a constraint on the configuration of the brake assembly. The inner circumference of ~~the~~ a standard sized ~~road~~ wheel common to commercial cargo trailers constrains the overall configuration of the brake assembly disposed within the wheel rim. The installation angle of the brake assembly is restricted by the need to clear the axle along with fitting within the inner circumference of the wheel rim. A further limitation on the brake assembly is the need for replacement of worn brake components such as brake pads or the brake rotor. Replacement of worn brake pads or brake rotors requires removal of the ~~road~~ wheel from the vehicle. Further, the overall size of the rotor must fit within the wheel rim inner circumference. As appreciated, limits on the configuration of the brake assembly translate into limitations on the overall braking capacity of the brake assembly. In addition to overall configuration constraints, the installation of the brake assembly within the wheel rim limits the amount of cooling airflow over the rotor and brake pads.

60,130-1495
02MRA0344

Please replace paragraph [5] with the following amended paragraph:

- [5] The wheel end assembly includes an axle shaft mounted for rotation within an axle housing. The axle shaft includes a hub mounted to a first end for mounting a wheel. A rotor is fixed to a second end of the axle shaft and cooperates with a brake caliper assembly for braking the wheel. The caliper assembly is mounted to the housing and the housing is mounted to a suspension member of the trailer. The rotor is mounted to the axle shaft at a point inboard of any portion of the wheel rim.

Please replace paragraph [6] with the following amended paragraph:

- [6] Each wheel assembly ~~of the trailer~~ includes an axle shaft including first and second ends. A hub is mounted on the first end to facilitate mounting of the wheel rim. The second end of the axle shaft includes a rotor that is selectably engagable by a caliper. ~~Each side of the trailer includes a separate wheel assembly and a separate brake assembly. The~~ brake caliper assembly and rotor of each brake assembly is mounted outside of the wheel assembly and inboard of the wheel rim ~~on the trailer~~.

Please replace paragraph [7] with the following amended paragraph:

- [7] In another embodiment of this invention, wheels ~~on each side of the trailer~~ are mounted to a common axle shaft and a single brake assembly is used to stop wheels on the common axle shaft. The common axle shaft includes a hub on each end for mounting of a wheel. The brake assembly is mounted on the common axle shaft inboard of each wheel hub. A rotor mounted to the common axle shaft rotates with the common axle shaft and cooperates with a caliper and actuator to brake the entire common axle shaft.

Please insert the following paragraph after paragraph 12:

- [12a] The hub 28 includes a cover 34 to protect the seals 24 and bearing assemblies 22 from debris. Lock nuts 36 secure the hub 28 to the axle shaft 20. The hub 28 includes wheel studs 38 for mounting the wheel 12.

60,130-1495
02MRA0344

Please replace paragraph [13] with the following amended paragraph:

- [13] A rotor 40 is mounted to a second end 32 of the axle shaft 20. Threaded members 50 secure the rotor to the axle shaft 20. A caliper 42 includes ~~brake-pads~~ 44 that are selectively engagable to the rotor 40 in response to actuation of actuator 46. The caliper 42 engages the rotor 40 to slow ~~of or~~ stop the axle shaft 20. The caliper 42 is actuated by a pneumatic actuator 46. Although a pneumatic actuator 46 is shown in this embodiment, it is in the contemplation of this invention that any type of a brake actuator known to a worker skilled in the art can be used.

Please replace paragraph [14] with the following amended paragraph:

- [14] ~~The brake-rotor 40, caliper 42, and actuator 46 are disposed inboard of the wheel 12. A~~ brake mount 48 secures a portion of the actuator 46 to the axle housing 18. The wheel 12 includes a portion that extends parallel to the axis of ~~rotations~~ 14 a fixed distance 58 from the hub 28. The rotor 40 is mounted on the axle shaft 20 a distance 59 from the hub 28 that is greater than the distance 58. The rotor 40 is disposed inboard of the wheel 12. Because the rotor 40 is disposed outside of an inner circumference 13 of the wheel 2, the rotor 40 can be inspected and maintained without removal of the wheel 12. In addition, the pads 44 can be inspected and removed without removing the wheel 12.

Please replace paragraph [15] with the following amended paragraph:

- [15] Referring to Figures 1 and 2, the vehicle 52 includes a wheel end assembly 10 at opposite sides of the vehicle 52 operating independent of one another. Each axle ~~shaft~~-housing 18 is mounted to a trailing arm 16. The trailing arm 16 is pivotally attached on one end to a frame ~~member~~-54. On a second end of the trailing arm 16 is a dampening member 56. Movement of the trailing arm 16 in response to inconsistencies in the roadway is controlled by the dampening member 56. It should be understood that it is within the contemplation of this invention to mount the axle housing 18 to the frame 54 in any manner known to a worker skilled in the art.

60,130-1495
02MRA0344

Please replace paragraph [17] with the following amended paragraph:

- [17] Referring to Figure 3, another embodiment of this wheel assembly is generally indicated at 60 and mounted to vehicle 52 having an axle shaft 64 that extends along the entire width of the vehicle 52. The axle shaft rotates within an axle housing 62, that is mounted to a trailing arm 68. The trailing arm 68 is pivotable mounted to the frame 54 and also supported by a suspension member 70. Wheels 12 are mounted to either side of the axle shaft 64 such that a single axle shaft freely rotates in response to movement of vehicle 52.

Please replace paragraph [18] with the following amended paragraph:

- [18] In this embodiment, a single rotor 72 is mounted at a point outside of the circumference of the wheels 12. The rotor 72 is mounted at a position inboard of wheels 12 disposed on either side of the axle shaft 64. Actuator 76 actuates the caliper 74 to engage the rotor 72. Because the rotor 72, caliper 74 and actuator 76 are mounted inboard of either wheel assembly, the size and specific configuration are not constrained by the inner circumference of the wheels 12 and can be sized as to provide sufficient braking supports and forces to brake the wheels disposed on either sides of the vehicle 52. Therefore, the brake rotor 72 and calipers 74 can be increased in size to provide sufficient braking torque in order to stop wheels 12 disposed on either side of the vehicle 52.